ENVIRONMENTAL Fact Sheet

EPA Basin Mining and Milling Sites, Northern Idaho

U.S. Environmental Protection Agency, Region 10 July 2006

Mine and Mill Sites Getting Cleaned Up

Why focus on cleaning up mine and mill sites?

The Coeur d'Alene Basin Superfund Record of Decision (also called Operable Unit 3 ROD) identified a number of mine and mill sites that could expose people to mining contaminants, mainly through site recreational use. Upper Basin mine and mill sites are prioritized chiefly on risks of lead exposure to recreational users. Cleanup designs address these risks, as well as any threats to water quality.

In 2003, the Basin Commission Mine and Mill Project Focus Team identified the Constitution site, the Rex mine and mill site, the Golconda site, and the Sisters waste-rock dump as early priorities. These sites were included in the Basin Environmental Improvement Project Commission five-year work plan. In 2005, the Idaho Department of Environmental Quality (DEQ) completed the cleanup of the Sisters site based upon the design developed by the U.S. Environmental Protection Agency (EPA). EPA, DEQ, the Bureau of Land Management (BLM), and their partners are moving forward on cleaning up the other early priority sites.

People use a number of these sites for recreation, which can expose them to metals in soils and sediments. Cleanup means either removing contaminated soils or leaving them in place, capped with clean materials. This will reduce exposure to people and impacts to surface and groundwater. In addition, for decades, metals like lead, zinc, and cadmium from these sites have been migrating into groundwater and surface water. These contaminants pose risks to fish, other aquatic life, birds, and mammals.

As work on these sites wraps up, the Mine and Mill Project Focus Team will prioritize other sites for cleanup, based on the Basin Commission's five-year plan and the Basin Record of Decision.

Mine and mill cleanups are making significant progress

Constitution cleanup started in June

Early in June, cleanup began at the Constitution Mine site. The mine is on the East Fork of Pine Creek about 7½ miles south of Pinehurst. The site sits on both BLM land and private property. The Army Corps of Engineers, working for EPA and BLM, awarded the construction contract to TPA-CKY, which has hired local subcontractors.

In the past, people could easily access tailings and waste rock at this site. Constitution is a popular area for dirt bike riding and ATV use, as well as recreational shooting and target practice. People using the site could be exposed to uncovered mine tailings and associated metals. The cleanup plan is to gather all contaminated soils at the Lower Constitution site and place them at the Upper Constitution area. Then they will be capped with clean materials and re-seeded. Controls will be put in place to prevent surface water runoff and erosion of the contaminated soils. This will reduce the flow of metals into the East Fork of Pine Creek and help protect the consolidated tailings from eroding.

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Mine and mill cleanups making significant progress *continued*

Upper Constitution tailings.

Constitution History

The Constitution Mine is an abandoned lead, silver, and zinc mine and mill site. It is made up of two distinct former mining sites: the Upper and Lower Constitution. In 1901, the first two mine claims were staked at the site. On-site milling began at Upper Constitution as early as 1916. In 1940, the company was reorganized and called the Spokane Idaho; the Upper Constitution mine and mill area was constructed and known as Spokane Idaho. The mine's last known production took place in1968.

Both Upper and Lower Constitution Mines contain man-made features: adits (mine entries), waste-rock piles, tailings piles, and mill foundations. Upper Constitution has two large tailings piles with about 36,000 cubic yards of fine-grained tailings. These are uncovered and could easily erode into Pine Creek. Lower Constitution contains about 1,400 cubic yards of tailings, some contaminated soils around the mill area, and a waste- rock pile that could erode if nearby Gilbert Creek overflows. High levels of arsenic—(139 milligrams/kilogram [mg/kg]), and lead (10,900 mg/kg)—have been measured in the tailings piles. For comparison, the soil cleanup levels established for recreational areas in the Basin are 100 mg/kg for arsenic, and 700 mg/kg for lead.

Golconda cleanup to continue through summer

The Golconda Mine and Mill Site lies along the north banks of the Upper South Fork of the Coeur d'Alene River, between Wallace and Mullan. The site is next to the Trail of the Coeur d'Alenes, highly visible, and easy to access. People often use the site for recreation. The site is on private property. The cleanup focuses on preventing people from directly contacting metals like arsenic, cadmium, lead, and zinc. It also addresses metal releases to surface and groundwater.

If you were near the site in April, you may have noticed DEQ's work: heavy digging equipment, workers, and pipes. DEQ's contractor, Ferguson Construction, has now completed Phase I of the Golconda project. Phase I was based on an EPA design and routed water through pipes from the site and mine adit to the stream. This will improve water quality by limiting how much water flows through contaminated materials.

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Golconda cleanup to continue through summer *continued*

It will also dry out the site for Phase II of the cleanup. The contractor built a temporary bridge over the South Fork of the river, so workers and equipment can reach the site during high stream flows.

photo courtesy of DEQ

Temporary bridge built for Golconda work.

EPA is funding Phase II of the Golconda cleanup, which is expected to begin sometime in August. Mine tailings will be removed to an upland area, capped with clean materials, and re-seeded. Armoring will be placed along the base of the waste-rock pile and the stream bank to limit erosion and prevent sediments from getting into the river. People using the Trail of the Coeur d'Alenes near the site should be aware of possible short detours and construction activity. Signs will be posted to notify trail users. When Phase II is finished, the bridge will be removed. The agencies expect that this will happen late this fall.

Golconda History

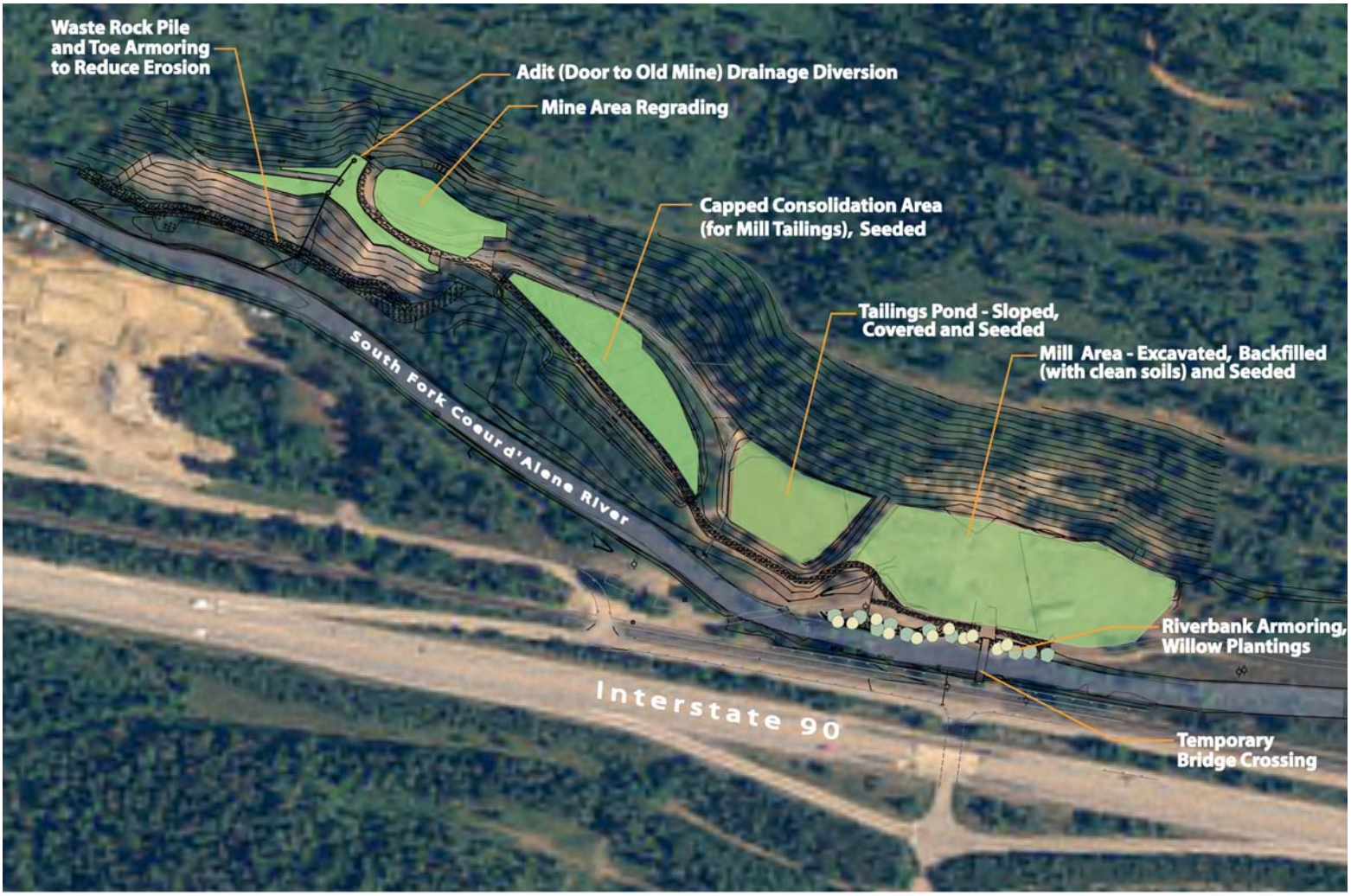
The Golconda Mining Corporation started operating in 1927. Mining continued until 1957, and the mill operated until 1960. The mine produced silver, lead, and zinc.

Workers install pipes to route water from old mine entry to waste-rock pile.

The site has three main sources of contaminants:

- the former mine area on the west end, containing a former adit (mine entry), a large waste-rock pile, and building foundations;
- the flotation tailings pond in the center of the site; and
- the former mill area on the east end, containing jig tailings that reach the groundwater and river bank.

(See Golconda mine and mill site map on page 4)



Golconda Mine and Mill Site

Remedial Action and Reclamation Project

North

Parametrix
June 2006

Rex cleanup design nearly complete

The Rex Mine and Mill sits in the East Fork of the Ninemile Creek Watershed, about seven miles north of Wallace. The Rex site is largely private land, with part of the tailings pile on BLM-administered land. Currently, people use the site for ATVs and other recreation. It is easily reached by an Upper and Lower Access Road through private property. There is one private residence next to the site. EPA's contractor, Parametrix/CDM, is completing the cleanup design. The cleanup aims to bring all contaminated soils together in one on-site location, and cap them with clean materials.

Rex mine and mill: tailings pond, waste rock, and debris.

Rex History

The Rex Mine operated from about 1905 to 1955. Milling stopped in 1963. The mill was built in the early 1940s; the mill area covers 6½ acres. In the 1980s, the mill operated as a custom mill on a limited basis. High concentrations of arsenic (50 mg/kg) and lead (46,600 mg/kg) were found in the tailings. For comparison, the soil cleanup levels established for recreational areas in the Basin are 100 mg/kg arsenic, and 700 mg/kg lead.

The tailings pile completely fills the former Rex Creek drainage at the site. Water runs through the tailings pile, which contains zinc, cadmium, and lead. The tailings dam has been in place for fifty years, and so far it has had no significant stability problems. However, the dam is fairly steep. If it were to erode or collapse, a dangerous amount of heavy metal could damage Ninemile Creek. The creek has already been cleaned up by the Silver Valley Natural Resource Trustees.

Goals of the Rex cleanup

(See Rex mine and mill site map on page 6)

The major goals are to:

- develop a cleanup design that protects human health and the environment;
- improve surface water quality in Ninemile Creek;
- regrade the site to promote surface drainage and encourage revegetation; and
- stabilize the tailings dam on the site.

Once construction begins, in late summer 2006 or summer 2007, workers will:

- build a wetland pond to collect surface water and groundwater;
- remove on-site debris;
- combine all highly contaminated soils and cap them with clean materials;
- regrade the site to promote surface water runoff and help new vegetation grow; and
- build a toe buttress to strengthen the tailings dam (This work may be conducted by BLM).

The cleanup will require permanent closure of the lower access road at the site. There are other alternate routes around the site via the Sunset Peak Road.

To learn more

For detailed technical design data, sampling results, and charts of the Rex site, go to *http://yosemite.epa.gov/r10/cleanup.nsf/basin/technical+documents*

Rex Mine and Mill Site

Remedial Action and Reclamation Project

North

Parametrix
June 2006

For More Information

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Visit the EPA Website: *http://yosemite.epa.gov/r10/cleanup.nsf/sites/cda*

If you need materials in an alternative format, please contact Debra Sherbina for reasonable accommodation. TTY users, please call 800-977-8339 and give the operator Debra Sherbina's number.

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